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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| AMSTER, ROTHSTEIN & EBENSTEIN LLP 90 PARK AVENUE NEW YORK, NY 10016 | | | EXAMINER SHEWAREGED, BETELHEM | |
| | | | ART UNIT 1794 | PAPER NUMBER |
| | | | MAIL DATE 12/27/2007 | DELIVERY MODE PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | |
|------------------------------|-----------------|----------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/785,290 | BARCOCK ET AL. |
| Examiner | Art Unit | |
| Betelhem Shewareged | 1794 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 09 October 2007.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 2-12 and 14-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 2-12 and 14-17 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

DETAILED ACTION

1. Applicant's response filed on 10/09/2007 has been fully considered. The 35 USC 112 rejection has been withdrawn in view of Applicant's comments.
2. Claims 2 is amended, claims 1 and 13 are canceled, claims 16 and 17 are added, and claims 2-12 and 14-17 are pending.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-12 and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohbayashi et al. (US 6,492,005 B1) in view of Farooq et al. (US 6,703,112 B1).
5. Ohbayashi discloses an ink jet recording sheet comprising a support and an ink absorptive layer on the support (abstract). The ink absorptive layer comprises boric acid (col. 15, line 51), metal ion compound (col. 18, line 10), and organic sulfur compound (col. 17, lines 14-31). The ink absorptive layer further comprises a binder (col. 13, line 61), antifoaming agents (col. 16, line 32), light stabilizers such as UV ray absorbers (col. 16, line 20), and/or hardeners (col. 15, line 28). The ink absorptive layer may be comprised of two or more layers (col.

17, line 1), and the more than two ink absorptive layers are equivalent to the claimed protective layer, dye fixing layer and ink absorbing layer. Ohbayashi does not teach an organometallic ion compound.

6. Farooq teaches an ink jet coating composition to be provided on a support, wherein the composition comprises organometallic multivalent salt (col. 4, line 58 thru col. 6, line 56) and pigment drying agents such as aromatic carboxylic acid containing sulfonic acid group attached to the aromatic ring (col. 8, lines 32-50).

7. Ohbayashi and Farooq are analogous art because they are from the same field of endeavor that is the ink jet recording art. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the organometallic ion of Farooq with the invention of Ohbayashi so as to take care of the pigment management function and to control the smudgeness and drying of the film (col. 3, line 25 of Farooq). Furthermore, the use of aromatic carboxylic acids along with metal ions is well known in the ink jet recording art in order to serve as drying agents for ink jet receptor media (col. 8, line 17).

8. Farooq does not disclose the claimed ratio of metal ion compound to organic sulfur compound. The experimental modification of this prior art in order to ascertain optimum operating conditions fails to render applicants' claims patentable in the absence of unexpected results. *In re Aller*, 105 USPQ 233. One of ordinary skill in the art would have been motivated to adjust the ratio of metal ion compound to organic sulfur compound in order to improve light fastness and minimize bleeding (col. 17, line 4 and col. 18, line 4 of Ohbayashi).

A *prima facie* case of obviousness may be rebutted, however, where the results of the optimizing variable, which is known to be result-effective, are unexpectedly good. *In re Boesch and Slaney*, 205 USPQ 215.

Response to Arguments

9. Applicant's argument is based on that the ozone protective layer would not be inherent to the teachings of the cited references. This argument is not persuasive because the Examiner did not apply the doctrine of inherency in the above rejection. Even though neither Ohbayashi nor Farooq expressly disclose ozone protective layer, the Office realizes that all of the claimed effects or physical properties are not positively stated by the reference(s). However, the reference(s) teaches all of the claimed ingredients. Therefore, the claimed effect, i.e. ozone resistance would implicitly be achieved by a composite with all the claimed ingredients. If it is the applicant's position that this would not be the case: (1) evidence would need to be provided to support the applicant's position; and (2) it would be the Office's position that the application contains inadequate disclosure that there is no teaching as to how to obtain the claimed effect with only the claimed ingredients. See MPEP 2112.01

10. Applicant further argued that the cited references do not teach or suggest a protective layer consisting essentially of the components set forth in claims 16 and 17. This argument is not persuasive for the following reasons. In Ohbayashi, the main components in the ink receiving layers are a hydrophilic binder, inorganic particles, hardeners and water-soluble cationic polymers, and

the rest of the components in these layers are optional additives. However, the current specification does not provide evidence that the presence of inorganic particles and water-soluble cationic polymers would materially affect the characteristic (ozone resistance) of the protective layer. See MPEP 2111.03

11. For the above reasons claims 2-12, 14 and 15 stand rejected, and claims 16 and 17 are included in the rejection.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

13. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Betelhem Shewareged whose telephone

number is 571-272-1529. The examiner can normally be reached on Mon.-Fri.
8:00AM-4:30PM.

15. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

16. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BS
December 15, 2007.


BETELHEM SHEWAREGED
PRIMARY EXAMINER